

IN THE CLAIMS

1. (currently amended) An isolated nucleic acid molecule comprising a polynucleotide encoding a phospholipase A2 γ polypeptide ~~and configured to generate transgenically generated phospholipase A2 (TG γ PLA₂) mice that supplies at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.~~
2. (original) An isolated nucleic acid molecule in accordance with Claim 1, wherein said phospholipase A2 γ polypeptide catalyzes cleavage of fatty acids from the sn-2-position of phospholipids.
3. (previously presented) An isolated nucleic acid molecule in accordance with Claim 2 wherein said polynucleotide encodes a sequence as set forth in SEQ ID NO: 6.
4. (original) A vector comprising a nucleic acid molecule in accordance with Claim 1.
5. (original) A cell transformed or transfected with a vector in accordance with Claim 4.
6. (canceled)
7. (currently amended) An isolated nucleic acid comprising a polynucleotide having at least about 90% sequence identity with SEQ ID NO: 6 wherein the encoded polypeptide has ~~or modulates an~~ enzymatic activity, and wherein the isolated nucleic acid is configured to generate transgenically generated phospholipase A2 (TG γ PLA₂) mice ~~supply at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.~~
8. (previously presented) An isolated nucleic acid according to claim 7 comprising SEQ ID NO: 6.

9. (currently amended) An antisense sequence which specifically hybridizes to SEQ ID NO: 6, wherein the antisense sequence is configured to ~~generate transgenically generated phospholipase A2 (TGiPLA₂) mice supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.~~

10-15. (canceled)

16. (currently amended) A vector comprising a nucleic acid molecule in accordance with Claim 1 suitable for generating a transgenic mouse wherein said vector comprises a reporter gene which encodes an enzyme capable of being detected by a colorimetric, fluorometric or luminometric assay.

17. (previously presented) A vector in accordance with Claim 16 wherein said reporter gene encodes a luciferase.

18-20. (canceled).

21-36. (canceled)

37. (currently amended) A transgenic construct containing a promoter upstream of [[the]] a full-length phospholipase A2 (iPLA₂) coding sequence (SEQ ID NO: 6) SEQ ID NO: 6 for myocardial specific expression of recombinant iPLA₂ in transgenically generated phospholipase A2 (TGiPLA₂) mice to supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.

38-39. (canceled)

40. (currently amended) An in vitro expression construct in which a truncated an iPLA₂ sequence is cloned downstream from [[the]] an SV40 promoter of Invitrogen, wherein the in vitro expression construct is configured to ~~generate transgenically generated phospholipase A2 (TGiPLA₂) mice supply at least one of fatty acids for β-oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.~~

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41-48. (canceled)